

In the Claims:

Please amend claims 1-3, 5-11, 13, 27-28, 30 and 41-42, and cancel Claims 12, 38 and 40, and add new claim 43, all as shown below. Applicant respectfully reserves the right to prosecute any originally presented or canceled claims in a continuing or future application.

1. (Currently Amended) A method for accepting a request in order to generate a response, comprising:

mapping the request to a control tree factory;

generating a control tree from the control tree factory based on the request, wherein the control tree can include a plurality of controls, wherein each control of the plurality of controls represents a graphical element of a graphical user interface (GUI);

~~initializing the plurality of controls and allowing each control of the plurality of controls to at least one of specify events that each said control listens for and register events that each said control can raise;~~

~~associating at least one event handler with at least one control in the plurality of controls to handle an event raised by another control in the plurality of controls using a callback mechanism;~~

using a render queue to collect one or more controls of the plurality of controls that are selected for pre-rendering;

dispatching each control in the render queue to a separate render worker using a separate thread;

processing the one or more controls in the render queue before the control tree is processed;

advancing the control tree through at least one lifecycle stage based on the request and updating the control tree; and

generating the response based on the control tree that is updated, wherein the response can be used to render at least a portion of a graphical user interface (GUI).

2. (Currently Amended) The method of claim 1 ~~wherein the step of generating a control tree from the factory comprises~~ further comprising:

creating a metadata representation of ~~[[a]]~~ the control tree; and

constructing the control tree based on the metadata representation.

3. (Currently Amended) The method of claim 1 ~~wherein~~ further comprising:

allowing the request to be one of: a hypertext transfer protocol request (HTTP), simple mail

transfer protocol request, an instant messaging request, a request based on a standard protocol; and a request based on a proprietary protocol; and

allowing the request to originate[[s]] from one of: a web browser, an instant messaging window, and a process.

4. (Original) The method of claim 1, further comprising:
providing the response to a web browser.
5. (Currently Amended) The method of claim 1 ~~wherein~~ further comprising:
using an interchangeable lifecycle component to drive the control tree ~~is driven~~ through the at least one lifecycle stage ~~by an interchangeable lifecycle component~~, wherein the interchangeable lifecycle driver isolates lifecycle driver implementation details from a container of the control tree and allows different lifecycle implementations to be interchanged.
6. (Currently Amended) The method of claim 1 ~~wherein~~ further comprising:
allowing at least one of the plurality of controls [[has]] to have an interchangeable persistence mechanism.
7. (Currently Amended) The method of claim 1 ~~wherein~~ further comprising:
allowing at least one of the plurality of controls [[can]] to render itself according to a theme.
8. (Currently Amended) The method of claim 1 ~~wherein~~ further comprising:
allowing at least one of the plurality of controls [[can]] to interact with another one of the plurality of controls.
9. (Currently Amended) The method of claim 1 ~~wherein~~ further comprising:
allowing at least one of the plurality of controls [[can]] to advance through the at least one lifecycle stage in parallel with another one of the plurality of controls.
10. (Currently Amended) The method of claim 1 ~~wherein~~ further comprising:
allowing the lifecycle stage [[is]] to be one of: init, load state, create child controls, load, raise events, pre-render, render, save state, unload and dispose; and
allowing ~~wherein~~ the lifecycle stage [[is]] to be part of a dynamically configurable lifecycle.

11. (Currently Amended) The method of claim 1 ~~wherein~~ further comprising:
allowing the response [[is]] to be one of: an hypertext transfer protocol (HTTP) response, a simple mail transfer protocol response, an instant messaging response, a response based on a standard protocol, and a response based on a proprietary protocol.
12. (Canceled).
13. (Currently Amended) The method of claim 1 ~~wherein~~ further comprising:
allowing the at least one control [[can]] to be one of: Book, Page, Window, Menu, Layout, Portlet, Theme, Placeholder, Shell, LookAndFeel, Desktop, Body, Footer, Header, Head, Titlebar, ToggleButton, TreeView, TreeViewWithRadioButtons, TextBox, TextArea, Label, Button and Anchor.
- 14-26. (Canceled)
27. (Currently Amended) A machine readable medium having instructions stored thereon that when executed by a processor cause a system to:
- map the request to a control tree factory;
 - generate a control tree from the factory based on the request wherein the control tree can include a plurality of controls, wherein each control of the plurality of controls represents a graphical element of a graphical user interface (GUI);
 - ~~initialize the plurality of controls and allowing each control of the plurality of controls to at least one of~~
 - ~~specify events that each said control listens for and~~
 - ~~register events that each said control can raise;~~
 - ~~associate at least one event handler with at least one control in the plurality of controls to handle an event raised by another control in the plurality of controls using a callback mechanism;~~
 - use a render queue to collect one or more controls of the plurality of controls that are selected for pre-rendering;
 - dispatch each control in the render queue to a separate render worker using a separate thread;
 - process the one or more controls in the render queue before the control tree is processed;
 - advance the control tree through at least one lifecycle stage based on the request and update the control tree; and

generate the response based on the control tree that is updated, wherein the response can be used to render at least a portion of a graphical user interface (GUI).

28. (Currently Amended) The machine readable medium of claim 27 ~~wherein the step of generating a control tree from the factory comprises~~ further having instructions that can cause a system to:

~~creating~~ create a metadata representation of a control tree; and

~~constructing~~ construct the control tree based on the metadata representation.

29. (Previously Presented) The machine readable medium of claim 27 wherein:

the request one of: a hypertext transfer protocol request (HTTP), simple mail transfer protocol request, an instant messaging request, a request based on a standard protocol; and a request based on a proprietary protocol; and

the request originates from one of: a web browser, an instant messaging window, and a process.

30. (Currently Amended) The machine readable medium of claim 27, further having instructions that can cause a system to comprising:

~~providing~~ provide the response to a web browser.

31. (Previously Presented) The machine readable medium of claim 27 wherein:

the control tree is driven through the at least one lifecycle stage by an interchangeable lifecycle component, wherein the interchangeable lifecycle driver isolates lifecycle driver implementation details from a container of the control tree and allows different lifecycle implementations to be interchanged.

32. (Previously Presented) The machine readable medium of claim 27 wherein:

at least one of the plurality of controls has an interchangeable persistence mechanism.

33. (Previously Presented) The machine readable medium of claim 27 wherein:

at least one of the plurality of controls can render itself according to a theme.

34. (Previously Presented) The machine readable medium of claim 27 wherein:

at least one of the plurality of controls can interact with another one of the plurality of

controls.

35. (Previously Presented) The machine readable medium of claim 27 wherein:
at least one of the plurality of controls can advance through the at least one lifecycle stage
in parallel with another one of the plurality of controls.

36. (Original) The machine readable medium of claim 27 wherein:
the lifecycle stage is one of: init, load state, create child controls, load, raise events, pre-
render, render, save state, unload and dispose; and
wherein the lifecycle stage is part of a dynamically configurable lifecycle.

37. (Previously Presented) The machine readable medium of claim 27 wherein:
the response is one of: a hypertext transfer protocol (HTTP) response, a simple mail transfer
protocol response, an instant messaging response, a response based on a standard protocol, and a
response based on a proprietary protocol.

38. (Canceled).

39. (Original) The machine readable medium of claim 27 wherein:
the at least one control can be one of: Book, Page, Window, Menu, Layout, Portlet, Theme,
Placeholder, Shell, LookAndFeel, Desktop, Body, Footer, Header, Head, Titlebar, ToggleButton,
TreeView, TreeViewWithRadioButtons., TextBox, TextArea, Label, Button and Anchor.

40. (Canceled).

41. (Currently Amended) The method of claim 1, further ~~comprises~~ comprising:
creating one or more new control in the control tree by the event handler to handle a event
raised by another control in the control tree that requires rendering of the one or more new control.

42. (Currently Amended) The method of claim 1, ~~wherein~~ further comprising:
allowing the control tree factory [[is]] to be a streaming control tree factory that creates a
control tree from an XML Stream.

43. (New) The method of claim 1, further comprising:

initializing the plurality of controls and supporting an inter-control communication mechanism that allows at least one control of the plurality of controls to at least one of

specify one or more events that other controls in the plurality of controls listen for, register at least one listener for an event that is raised by another control in the plurality of controls, and

use an event handler to handle the event raised by the another control in the plurality of controls using a callback mechanism initiated by the at least one listener.